The Universal Waste Rule for Batteries WAC 173-303-573(2)

Any business that generates dangerous waste must follow the dangerous waste rules, Chapter 173-303 WAC. In Washington State the Universal Waste Rule allows less burdensome management of the following wastes:

- Batteries *(#98.407.a)*
- Thermostats *(#98-407.b)*
- Lamps *(#98-407.c)*
- Mercury-containing equipment *(#98-407.b)*

Businesses have the choice of managing these wastes as universal waste (UW) or dangerous waste. UW requirements for storage, transportation and collection are less stringent.

Can I manage batteries at my business as Universal Waste?

All batteries that are dangerous waste can be managed as UW including:

- Alkaline
- Mercuric-oxide
- Alkaline-manganese
- Zinc carbon
- Zinc air
- Button cell mercuric-oxide
- Silver oxide
- Lithium
- Nickel-Cadmium (Ni-Cd)

Spent lead-acid batteries (typically, automobile batteries) can be managed as universal waste. However they are most often managed under the optional lead-acid battery exemption (WAC 173-303-520).

You can manage consumer products with difficult-to-remove batteries as universal waste. Miniature batteries can also be managed as universal waste. They are used in numerous products that require compact sources of electrical power, including toys, hearing aids, watches, calculators, and other portable devices. There is typically 0.1% to 2.0% mercury content in the formulations of most zinc air, alkaline manganese, and silver oxide miniature batteries.

How do I manage Universal Waste batteries?

Labeling and marking:

Clearly label or mark individual batteries or containers of UW batteries with one of the following phrases:

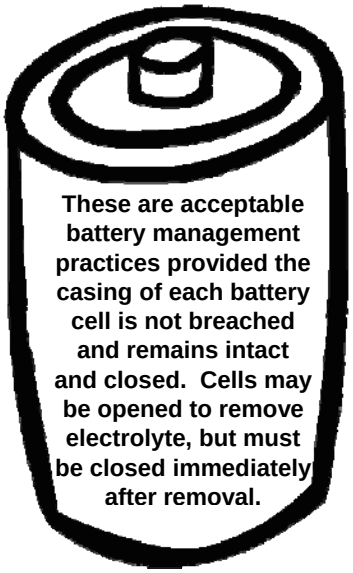
- *Universal Waste – Batteries*
- *Waste Batteries*
- *Used Batteries*

Accumulation and dating of universal waste batteries:
You can accumulate batteries for one year from the date they are generated. To document this, the collection container or individual UW battery is typically marked with the first date of accumulation. An extension to the one year accumulation limit is allowed if the facility needs more time to collect enough items to facilitate proper recovery, treatment, or disposal.

Prevent releases to the environment:
Store damaged or leaking batteries in closed containers to prevent releasing toxic materials to the environment. Batteries must be compatible with one another and with the container.

Handlers[1] may not dilute, dispose, or treat universal wastes:
The following routine battery management activities are not considered treatment:

- sorting batteries by type
- mixing battery types in one container
- discharging batteries
- regenerating used batteries
- disassembling battery packs,
- removing batteries from discarded consumer products
- removing electrolyte



Large Quantity Handlers of Universal Waste (LQHUW)
When a handler exceeds 11,000 pounds (or 2,200 pounds for lamps), they become an LQHUW and are subject to extra requirements, including:

- Notification to Ecology of LQHUW status, and which specific types of UW they manage.
- Tracking type and quantity of universal wastes received and shipped.
- Obtaining a RCRA Site Identification Number.

Transporting UW batteries:
You may self-transport UW batteries, complying with applicable U.S. Department of Transportation regulations. Refer to Ecology publication number 98-407 *The Universal Waste Rule* for details.

A dangerous waste generator has the choice of managing batteries as UW or under the more stringent dangerous waste requirements. In most cases UW management is much easier and the preferable alternative to dangerous waste management. Note that businesses that generate and manage dangerous wastes and UWs are considered both a dangerous waste generator and a UW handler. Regardless if you are a generator or a handler, you are liable for ensuring your waste is properly managed once it leaves your site.

[1] Handlers are either the original generators of the UW or businesses that receive and consolidate UW from other handlers before shipping to another handler or to a destination facility.

Where do I send them?

UW batteries may be sent to either another handler (acting as a collection point) or to a destination facility. Another handler could include any business that is already managing UW, government-sponsored collections, or hazardous waste management firms. Businesses that recycle or dispose of UW are called destination facilities. Ultimately, all UW must go to a destination facility. They are subject to dangerous waste regulations for recyclers and hazardous waste disposal facilities. A facility that only accumulates UW would not be a destination facility.

For a list of firms that offer waste management services, visit http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm.

Why are batteries hazardous?

Mercury, lead, cadmium and other heavy metals can leak from batteries and pose environmental risks when released to the environment through improper disposal practices. Because mercury is highly toxic to humans and wildlife, it is very important to properly manage batteries containing mercury. Persistent in the environment, mercury increases in concentration as it goes up the food chain. Miniature batteries are most likely to contain mercury.

Another concern with waste batteries is their potential to explode. Batteries stored in contact with one another can generate heat and hydrogen gas. If the storage container is not ventilated, it can explode. Also, some battery types may not be compatible and could cause unwanted reactions.

Not all batteries are recycled in the same way, so generators are encouraged to segregate their batteries by type. For instance, nickel cadmium batteries can be recycled to recover their metal content. A recycler may not accept them if they are mixed with alkaline or other batteries.

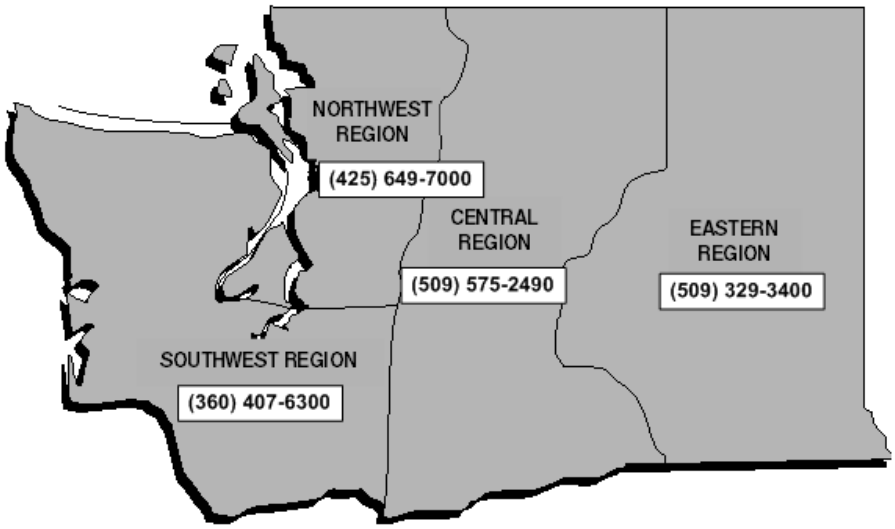
In the past, alkaline batteries designated for their mercury content and as a solid corrosive waste in Washington State. The mercury content in batteries has been decreasing due to changes in manufacturing, but alkaline batteries continue to designate as a solid corrosive waste. A generator may test batteries to determine if they are dangerous waste.

How do I manage household batteries?

Homeowners are not required to manage their batteries as UW, but are strongly encouraged to take them to a household hazardous waste collection facility if available. Another option for rechargeable batteries is to return them to the place of purchase, if the retail store participates in a battery return program. Many retailers participate in a take-back recycling program operated by the Rechargeable Battery Recycling Corporation (RBRC). To find a local participating store, go to the RBRC Web site at http://www.rbrc.org/consumer/index.html.

For More Information

Questions on this topic may be directed to your nearest regional office Dangerous Waste Specialist.



If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.